Astron SPRINT

- HIGH PERFORMANCE
- COMPETITION DESIGN
- 1600 FT. FLIGHTS

SKILL LEVEL 3

1—Beginner 2—Intermediate 3—Craftsman 4—Advanced 5—Expert

SPECIFICATIONS

Length	13.8'' (35 cm.)	Weight	1.0 oz. (28 g.)
Body Dia.	0.976'' (24.8mm.)	Streamer Recovery	

RECOMMENDED ENGINES

1/2A6-2 A8-3 B6-4 B4-6 B6-6 B14-5 C6-7

Use A8-3 for first flights. Engines and launcher not included.

K-49
#1249

ESTES INDUSTRIES
PENROSE, COLO. 81240

ESTES®

A SUBSIDIARY OF DAMON

Recommended for Ages 10 to Adult. Adult Supervision Suggested for Those Under 12 Years of Age When Flying Model Rockets.

1 MODEL KIT
Paint and Glue not included.
1 MODÈLE RÉDUIT
Peinture et Colle non comprises.

Flying Model Rocket

FLY ESTES
Model Rockets

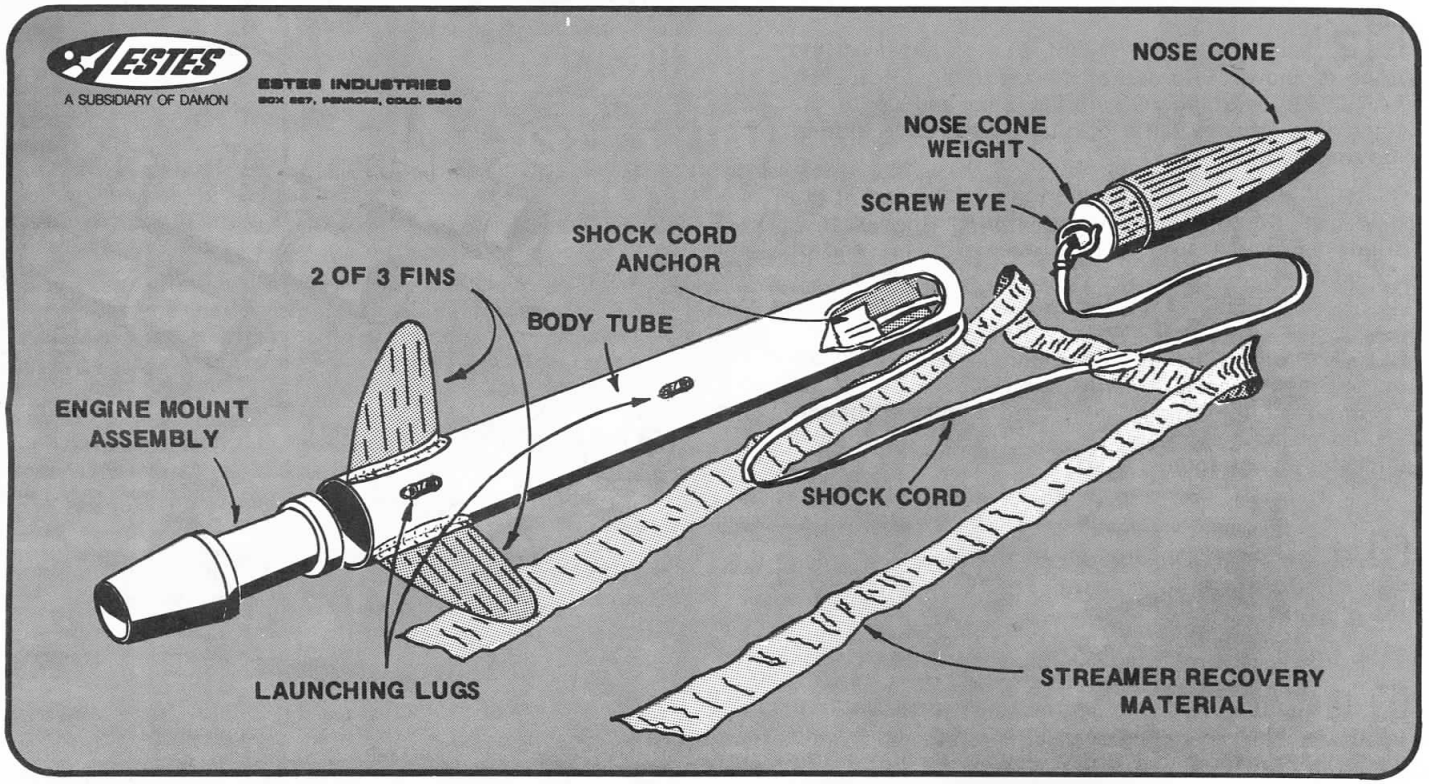
A Rewarding Hobby for Ages 10 to Adult.

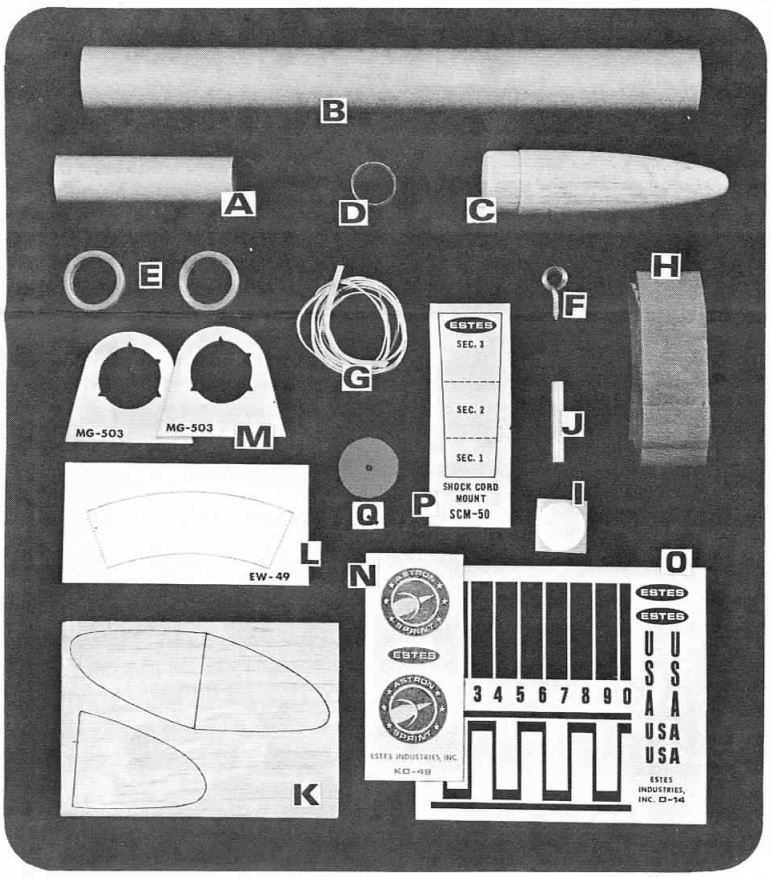
ESTES INDUSTRIES
PENROSE, COLO. 81240 USA
Dist. in Canada by: HOBBY INDUSTRIES
24 Ronson Drive, Rexdale, Ontario M9W 1B4

Astron SPRINT

Designed by Mike Dorffler K-49

ASSEMBLY INSTRUCTIONS





Check to be sure your kit is complete. Read all of the instruction steps, then begin assembly of your rocket. Check off each step as you complete it.

PARTS LIST

A	1	Body Tube	BT-20J
B	1	Body Tube	BT-50W
C	1	Nose Cone	BNC-50X
D	1	Engine Block	EB-20B
E	2	Centering Rings	AR-2050
F	1	Screw Eye	SE-1
G	1	Shock Cord	SC-1
H	1	Streamer	SM-1C
I	1	Tape Disc	TD-1A
J	1	Launch Lug	LL-2A
K	1	Die-Cut Fins	BF-49
L	1	Tail Cone	EW-49
M	2	Marking Guides	MG-503
N	1	Decal Sheet	KD-49
O	1	Decal Sheet	D-14
P	1	Shock Cord Mount	SCM-50
Q	1	Nose Cone Weight	NCW-1

In addition to the parts above, you will need white glue, a sharp pencil, a ruler, medium and fine sandpaper, balsa filler and paint or butyrate dope.

ASSEMBLY INSTRUCTIONS

☒ 1 Run a line of glue around the inside of one end of the engine mount tube (Part #BT-20J). Slide the engine block (Part #EB-20B) in until it is even with the end of the tube. Wipe away any excess glue.

☒ 2 Mark the engine mount tube 1-5/8'' from the front as shown. Slip one of the centering rings (Part #AR-2050) onto the rear of the tube and up to the mark. Run a heavy fillet of glue around each side of the ring as shown.

Run a line of glue around the forward end of the tube and slip the remaining centering ring on in a single movement so that it is even with the end of the tube.

☒ 3 Preform the tail cone shroud (Part #EW-49) by pulling it under a knife handle or a pencil as shown. Pull the shroud under the handle or pencil and up at the same time. Do this several times until the cone can be formed easily.

☒ 4 Apply glue to the tab on the cone and press into position exactly as shown. Hold it in place until the glue sets.

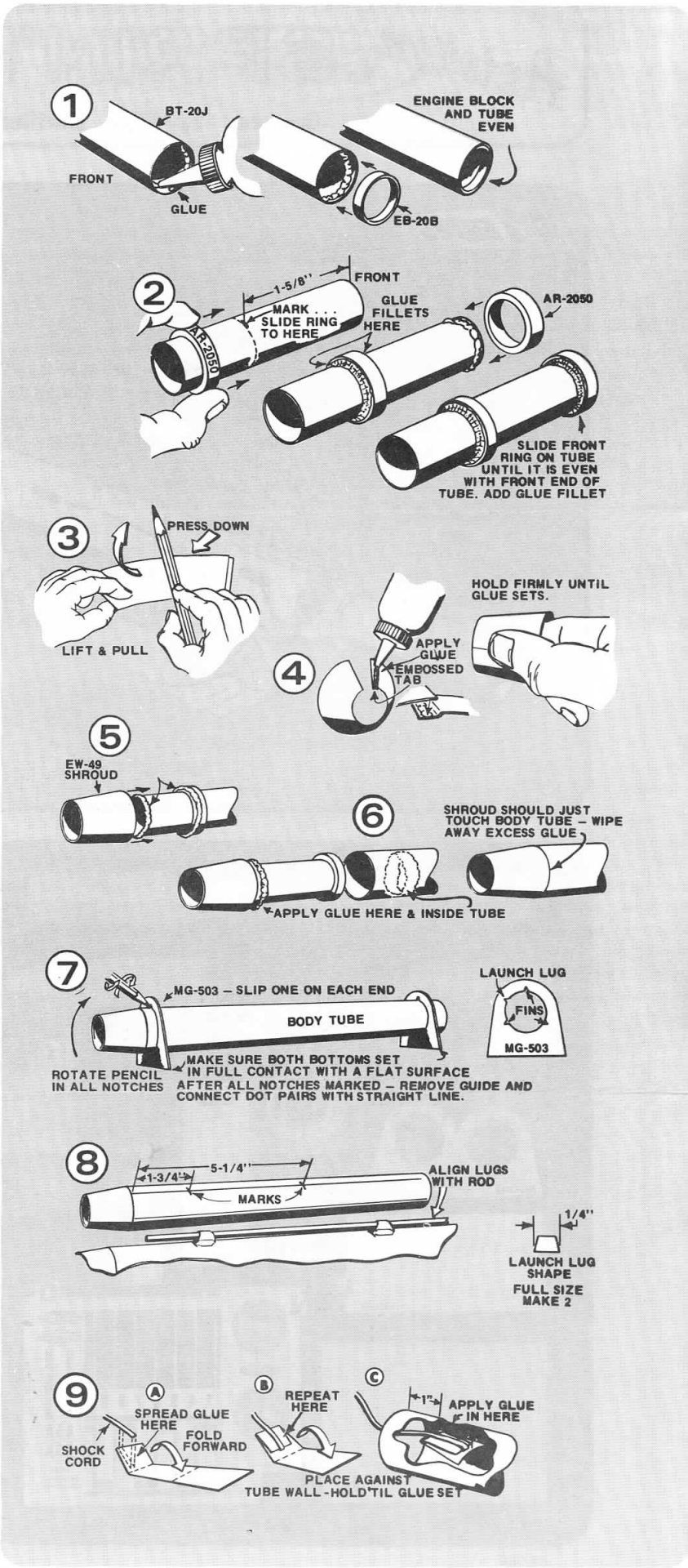
☒ 5 Apply glue to the engine mount tube and rear centering ring as shown. Slide the tail cone into place so that the small end is even with the rear of the tube.

☐ 6 Smear a band of glue around the inside of the body tube (Part #BT-50W), 1-1/2'' inward from one end. Also apply glue to the rear centering ring in the manner shown. With a single movement, slide the engine holder into position so that the tail cone just touches the rear of the body tube. Carefully wipe away any excess glue from this joint.

☒ 7 Slip the tube marking guides (Part #MG-503) onto the body tube, one at each end, making sure the *launch lug notches* are on the same side. Use a flat surface to make sure the flats are aligned. Rotate a sharpened pencil in the notches as shown, remove the guides and connect each matching front and rear mark.

☒ 8 Mark the launch lug alignment line 1-3/4'' and 5-1/4'' from the rear of the tube. Cut the launch lug (Part #LL-2A) into two 1/4'' lengths as illustrated. Glue them on the body tube just forward of the marks, using a section of launch rod to align them correctly.

☐ 9 Cut out the shock cord mount (Part #SCM-50) and prefold it on the dotted lines. Lay the mount out flat, apply glue to section 1 and lay the shock cord (Part #SC-1) into the glue. Fold this section over. Spread glue on the back of the first section and the exposed portion of section 2. Lay the cord as shown and fold over again. Clamp the unit together with your fingers while the glue sets.



Apply glue to the inside of the body tube over an area approximately 1'' to 1-1/2'' from the forward end. The glue should cover a shape approximately the same as the shock cord mount. Press the mount into the glue and hold it until the glue sets.

USE CARE ON FINS...

☒ **10** Separate the die-cut fins from their sheet and carefully sand to the section illustrated. The airfoiled fins on the Astron Sprint contribute greatly to the performance of the model and therefore should be shaped very carefully. However, if the model is to be flown only for sport, rounding of all fin edges (except the root edge) is adequate.

☒ **11** Run a very light bead of glue along each fin root edge and thoroughly rub in with a finger. The balsa will absorb the glue completely and will add to the strength of the finished joint. Then, one fin at a *time, run* another bead of glue along the root edge and attach the fin directly on the alignment line so that it stands straight away from the body tube and straight forward on the alignment line. Repeat this with the remaining two fins. Support the model vertically until the glue dries.

FINISHING TOUCHES

☒ **12** Insert the screw eye (Part #SE-1) into the nose cone (Part #BNC-50X). Remove the screw eye and squirt glue into the hole. Replace the screw eye.

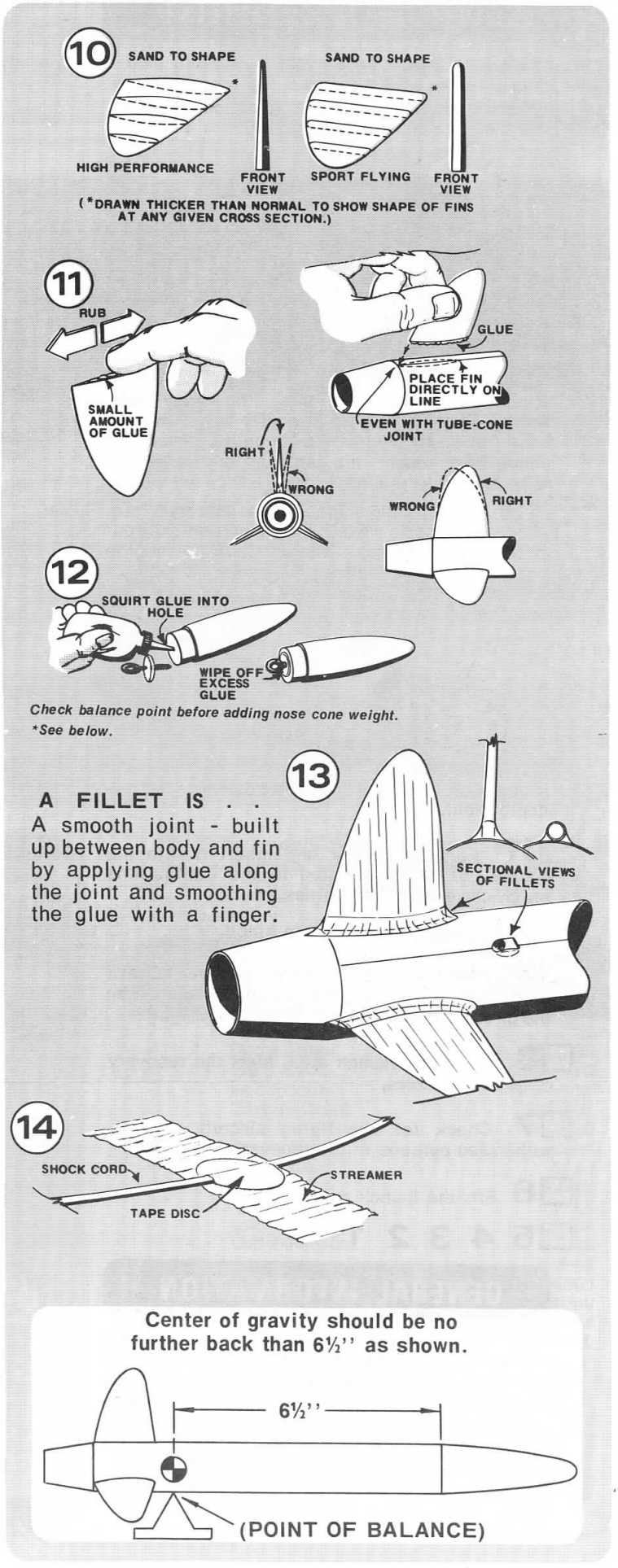
☒ **13** Apply a glue fillet to both sides of each fin-body tube joint. Smooth the glue with a finger and carefully wipe away any excess. Apply a fillet to both launch lugs in the same manner. Support the model horizontally while the fillets dry.

☒ **14** After the rocket has dried sufficiently to be handled, tie the shock cord to the screw eye. Then . . . lay the middle of the shock cord across the middle of the streamer and secure it with the tape disc (Part #TD-1).

PAINTING & DECALS

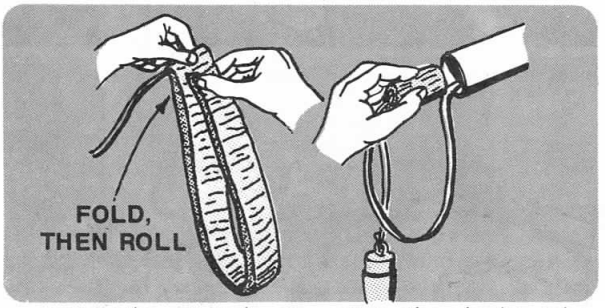
☐ **15** Before finishing, be sure that all the glue on the outside of the rocket is completely dry. Cover all balsa surfaces with a coat of sanding sealer. Let it dry completely and sand lightly with extra fine sandpaper. Apply a second coat, let dry, sand again, apply a third coat and repeat the process until the pores in the balsa are filled and the surface looks and feels quite smooth. Give the rocket a clean base coat of gloss white paint or dope. When dry, sand lightly. Repeat if the finish appears unsatisfactory. Then follow with the color or colors of your choice.

☐ **16** Cut out each decal carefully around its edges. To transfer, dip the decal in warm water for about 30 seconds or until the decal slides easily from the backing paper. Slide the decal off the paper onto the desired surface, and blot dry. Let the decals dry for 24 hours.



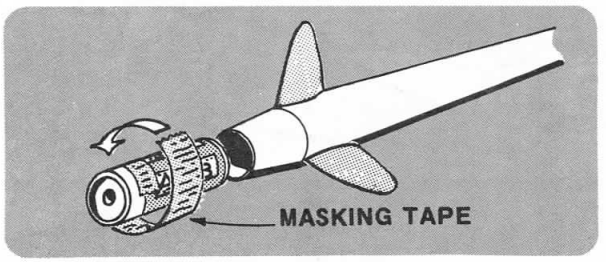
COUNTDOWN CHECKLIST

☐**13** Pack 5 or 6 squares of flameproof wadding into the body tube from the top. Fold the streamer in half lengthwise from where it is attached to the shock cord. Roll the streamer



compactly enough to enter the body tube easily. Push the rolled streamer down into the body tube on top of the wadding. Pack the shock cord neatly into the tube and slide the nose cone into place.

☐**12** Select your engine. It is important that you wrap enough masking tape around the rear of the engine to make a snug fit in the engine



mount tube. This will provide positive streamer deployment.

☐**11** Form an igniter and insert it into the engine nozzle as directed in the instructions which came with the engines.

☐**10** Slide the engine into place.

☐**9** Place the rocket on the launcher. Check to be sure that the panel is disarmed. Clean the micro-clips and attach them to the igniter.

☐**8** Clear the launch area, alert the recovery crew and trackers.

☐**7** Check for low flying aircraft and unauthorized persons in the recovery area.

☐**6** Arm the launch panel.

☐**5 4 3 2 1** LAUNCH.

GENERAL INFORMATION

The Astron Sprint is designed to give the highest performance in its class, incorporating the most efficient aerodynamic shapes for the velocities it will encounter. Even the launch lug location is engineered to minimize drag and tip-off at launch for best vertical flight. First test launches of the Sprint should be made with an A8-3 engine. (Flights of the Sprint at the Estes plant prove it capable of over 1600' altitude with a C6-7 engine.)

ESTES

A SUBSIDIARY OF DAMON

Astron

SPRINT

FIRST TRUE COMPETITION MODEL

U S A
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U S A
U S A

ESTES
INDUSTRIES,
INC. D-14
37014

ESTES INDUSTRIES, INC.
37047

INSTRUCTIONS

1. Cut decals apart.
2. To transfer, dip decal into water for approximately 30 seconds or until decal slides on paper backing. Slide decal off paper onto desired surface.
3. Blot dry with clean damp cloth. Allow to dry 24 hours.

ESTES INDUSTRIES, INC.
Box 227
PENROSE, COLORADO

TO TRANSFER, DIP DECAL INTO WATER FOR APPROXIMATELY 30 SECONDS OR UNTIL DECAL SLIDES ON PAPER BACKING. SLIDE DECAL OFF PAPER ONTO DESIRED SURFACE.

BLOT DRY WITH CLEAN DAMP CLOTH. ALLOW TO DRY 24 HOURS.

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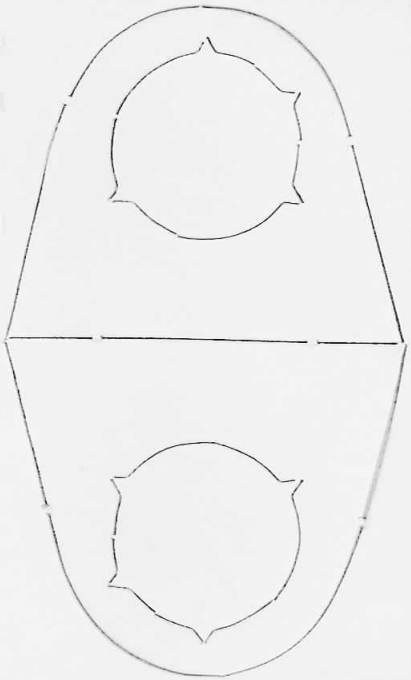

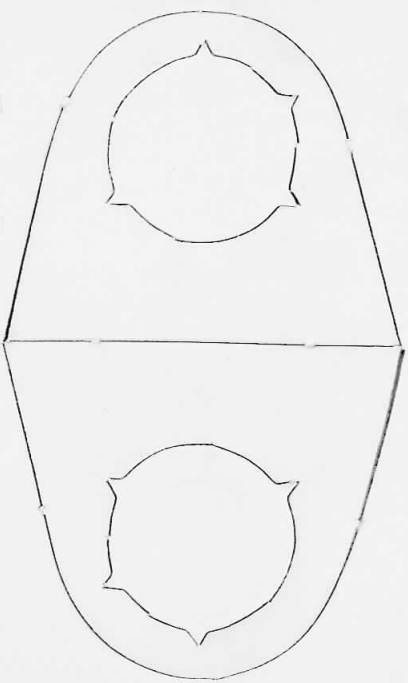

SHOCK CORD
MOUNT
SCM-50